

## **LISTING OF THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.     **(Canceled)**
2.     **(Previously Presented)**     An optical adaptor according to claim 23, wherein the information device is an identification IC chip.
3.     **(Canceled)**
4.     **(Previously Presented)**     An endoscope device according to claim 23, wherein reading of the optical characteristic information from the optical adaptor to the reading section is performed by wireless transmission.
5.     **(Previously Presented)**     An endoscope device according to claim 4, wherein the optical adaptor comprises an identification IC chip, the reading section comprises an antenna, and reading of the optical characteristic information is performed by the wireless transmission between the identification IC chip, and the antenna.
6.     **(Previously Presented)**     An endoscope device according to claim 23, wherein the optical adaptor comprises a joining terminal, the reading section comprises a joining terminal, and reading of the optical characteristic information from the optical adaptor to the reading section is performed via a connection between the joining terminal of the optical adaptor and the joining terminal of the reading section.
7.     **(Previously Presented)**     An endoscope device according to claim 6, wherein the optical adaptor comprises an identification IC chip, and reading of the optical characteristic

information is performed via the connection between a joining terminal of the identification IC chip and the joining terminal of the reading section.

8. **(Withdrawn)** An endoscope device according to claim 23, wherein the optical adaptor comprises a coil, the reading section comprises a coil, and reading of the information from the optical adaptor to the reading section is performed by reading a resonance frequency between the coil of the optical adaptor and the coil of the reading section.

9. **(Withdrawn)** An endoscope device according to claim 23, wherein the optical adaptor comprises a resistor, and reading of the information from the optical adaptor to the reading section is performed by reading electrical resistivity of the resistor.

10. **(Withdrawn)** An endoscope device according to claim 23, wherein reading of the information from the optical adaptor to the reading section is performed by reading a concave or convex shape formed in the optical adaptor.

11. **(Withdrawn)** An endoscope device according to claim 23, wherein the optical adaptor comprises a magnetic material, and reading of the information from the optical adaptor to the reading section is performed by reading a flux level of the magnetic material.

12. **(Withdrawn)** An endoscope device according to claim 23, wherein the optical adaptor comprises an information display section, and reading of the information from the optical adaptor to the reading section is performed by reading information of the information display section.

13. - 22. **(Canceled)**

23. **(Previously Presented)** An endoscope device comprising:  
a control unit;

an endoscope insertion section having a tip and a light receiving section at the tip;  
an optical adaptor which is detachably installed at the tip of the endoscope insertion section, the optical adaptor having a stereo optical system which forms an image in the light receiving section and an information device containing an optical characteristic information, the optical characteristic information comprising focal lengths of the stereo optical system, a distance between optical axes of the stereo optical system and at least one distortion correction parameter for correcting distortion of an image of an object captured by the stereo optical system; and  
a reading section which reads the optical characteristic information from the optical adaptor,  
wherein the control unit receives the optical characteristic information from the optical adaptor, corrects a distorted image using the at least one distortion correction parameter, and determines a geometric characteristic of the object using the focal lengths and the distance between the optical axes based on the corrected image.

**24. (Previously Presented)** An endoscope device according to claim 23, wherein the information device includes an information for identifying the optical adaptor.

**25. (Previously Presented)** An endoscope device according to claim 24, wherein the control unit receives the information for identifying the optical adaptor and uses the information for identifying the optical adaptor for a calibration process.

**26. (Previously Presented)** An endoscope device according to claim 25, wherein the control unit is operable to calibrate the stereo optical system and the light receiving section as part of the calibration process, to generate a measurement environment data containing an information after the calibration process and to store the measurement environment data in a memory of the control unit.

**27. (Previously Presented)** An endoscope device according to claim 26, wherein the control unit uses the measurement environment data stored in the memory for a measuring process once the calibration process is completed.

**28. (Withdrawn)** A stereo measurement method using an endoscope device, the method comprising the steps of:

reading at least an identification information and an optical data stored in an identification device;

reading an information related to a relative position between a charge coupled device and an observation optical system from an optical adaptor when the optical adaptor is mounted on a tip of an endoscope insertion section;

obtaining a positional error between the charge coupled device and the observation optical system using a relative position information and the information related to the relative position between the charge coupled device and the observation optical system;

correcting the optical data using the positional error;

performing coordinate transformation of a measurement image based on the optical data after the correction; and

obtaining three positional coordinates of an arbitrary point by matching images obtained by coordinate transformation.

**29. (Previously Presented)** An endoscope device according to claim 23, wherein the optical characteristic information is stored in a memory of the control unit and applied to a measurement process without being read again by the reading section.

**30. (New)** An endoscope device comprising:  
a control unit;  
an endoscope insertion section having a tip and a light receiving section at the tip;  
an optical adaptor which is detachably installed at the tip of the endoscope insertion section, the optical adaptor having a stereo optical system which forms an image in the light

receiving section and an information device containing an optical characteristic information, the optical characteristic information comprising focal lengths of the stereo optical system, a distance between optical axes of the stereo optical system and at least one distortion correction parameter for correcting distortion of an image of an object captured by the stereo optical system; and

a reading section which reads the optical characteristic information from the optical adaptor,

wherein the control unit receives the optical characteristic information from the optical adaptor, corrects a distorted image using the at least one distortion correction parameter, and determines a geometric characteristic of the object using the focal lengths and the distance between the optical axes based on the corrected image, and

wherein reading of the optical characteristic information from the optical adaptor to the reading section is performed upon attachment of the optical adaptor to the tip of the endoscope insertion section.

**31. (New) An endoscope device comprising:**

a control unit;

an endoscope insertion section having a tip and a light receiving section at the tip;

an optical adaptor which is detachably installed at the tip of the endoscope insertion section, the optical adaptor having a stereo optical system which forms an image in the light receiving section and an information device containing an optical characteristic information, the optical characteristic information comprising focal lengths of the stereo optical system, a distance between optical axes of the stereo optical system and at least one distortion correction parameter for correcting distortion of an image of an object captured by the stereo optical system; and

a reading section which reads the optical characteristic information from the optical adaptor, the reading section comprising a joining terminal physically contacting the optical adaptor,

wherein the control unit receives the optical characteristic information from the optical adaptor, corrects a distorted image using the at least one distortion correction parameter, and

determines a geometric characteristic of the object using the focal lengths and the distance between the optical axes based on the corrected image, and

wherein reading of the optical characteristic information from the optical adaptor to the reading section is performed via the physical contact between the optical adaptor and the joining terminal of the reading section.